

Ginnie Contract	Shortcomings	MFC Contract
GNMA GDR	<ol style="list-style-type: none"> 1. Conversion factors across coupons - cheapest to deliver MBS was that with the highest coupon - poor hedge for current coupon. 2. Introduction of Treasury contract. 	<ol style="list-style-type: none"> 1. Conversion factors across Agencies only; not across coupons. 2. Treasury contract no longer as effective in hedging MBS basis.
	<ol style="list-style-type: none"> 1. Conversion factors across coupons - cheapest to deliver MBS was that with the highest coupon - poor hedge for current coupon. 2. Greater liquidity in CDR contract; marginal benefit in CD contract. 	<ol style="list-style-type: none"> 1. Conversion factors across Agencies only; not across coupons. 2. Market needs a more effective, exchange-traded hedging instrument for mortgage basis.
GNMA II	<ol style="list-style-type: none"> 1. Narrow appeal of contract, in part, due to removal of delivery option. 2. Competing Treasury and CDR contracts. 	<ol style="list-style-type: none"> 1. Contract designed to appeal to broad spectrum of mortgage market participants. 2. Market needs a more effective, exchange-traded hedging instrument for mortgage basis.

Fig. 1A

<p>Cash Settled</p>	<ol style="list-style-type: none"> 1. Initial introduction of monthly contracts failed to obtain significant 2. Taint of failed CDR contract. 3. Poor market timing - wide MBS spreads. 	<ol style="list-style-type: none"> 1. Initial introduction of quarterly contracts to obtain critical trading mass in one contract. 2. Significant change in market size and level of sophistication, and need for better tools. 3. Propitious market timing; significant volatility.
<p>Mortgage Backed</p>	<ol style="list-style-type: none"> 1. Initial introduction of monthly contracts. 2. Possibility of multiple contracts within the same delivery month. 3. Only marginal benefits over competing substitutes (Treasuries, futures & cash). 4. Poor market timing - low volatility. 	<ol style="list-style-type: none"> 1. Initial introduction of quarterly contracts to obtain critical trading mass in one contract. 2. One contract per delivery month. 3. Significant benefits over competing substitutes: superior hedging effectiveness, credit, risk management, valuable basketing, Agency squeeze protection, ease of settlement. 4. Propitious market timing; significant volatility.

Fig. 1B

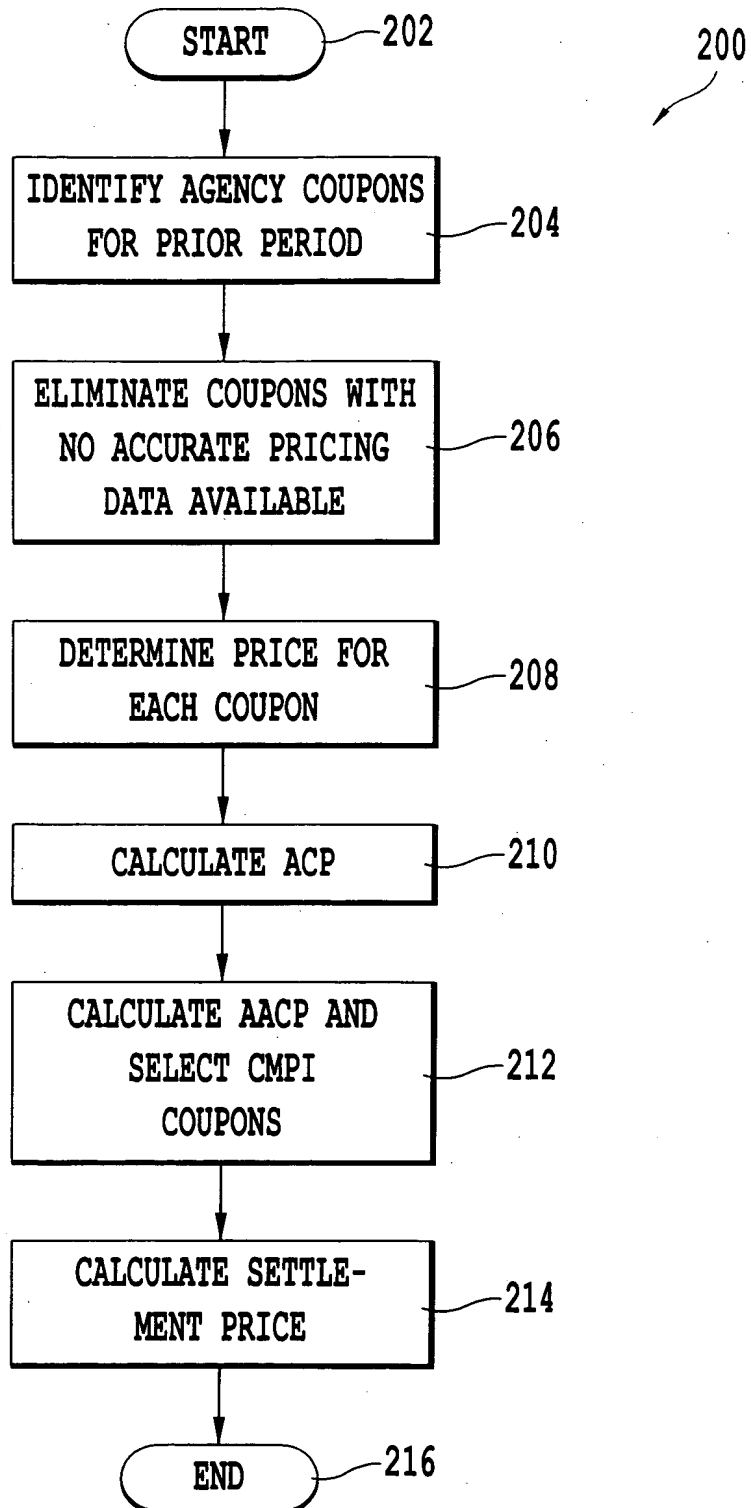


Fig. 2

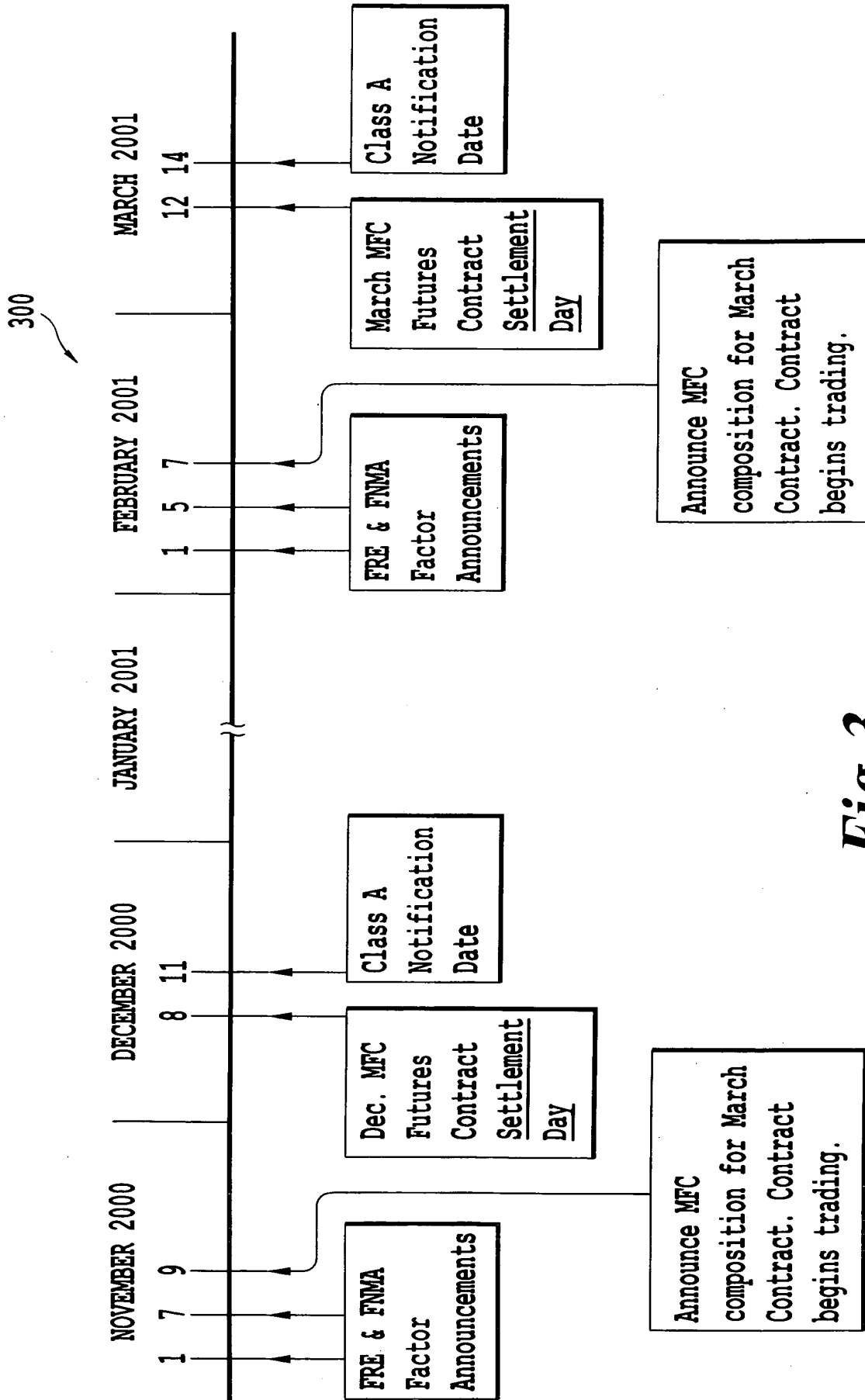


Fig.3

Year	LBMI Price Return				SBMI Total Return				Conventional Par Price Return		
	MFC	FN Par	10 Yr Swap	10 Yr Treas	MFC	FN Par	10 Yr Swap	10 Yr Treas	MFC	10 Yr Swap	10 Yr Treas
1990	0.98	0.98	0.94	0.95	0.99	0.98	0.94	0.94	0.96	0.93	0.92
1991	0.99	0.85	0.53	0.77	0.97	0.86	0.58	0.80	0.83	0.77	0.89
1992	0.98	0.93	0.81	0.79	0.97	0.91	0.78	0.76	0.97	0.93	0.89
1993	0.79	0.64	0.53	0.47	0.83	0.66	0.54	0.51	0.88	0.95	0.73
1994	0.95	0.91	0.86	0.88	0.96	0.91	0.86	0.87	0.96	0.94	0.86
1995	0.90	0.96	0.86	0.92	0.92	0.96	0.84	0.90	0.89	0.88	0.94
1996	0.99	0.95	0.95	0.94	0.99	0.95	0.96	0.93	0.94	0.97	0.96
1997	0.99	0.99	0.88	0.92	0.98	0.98	0.86	0.90	0.97	0.93	0.95
1998	0.99	0.97	0.74	0.73	0.97	0.96	0.76	0.75	0.97	0.83	0.84
1999	0.96	0.90	0.72	0.40	0.98	0.90	0.73	0.42	0.97	0.91	0.66
90-94	0.92	0.83	0.75	0.80	0.91	0.81	0.73	0.77	0.92	0.91	0.85
95-99	0.95	0.94	0.84	0.78	0.95	0.93	0.82	0.77	0.95	0.92	0.88
90-99	0.93	0.86	0.78	0.79	0.91	0.84	0.77	0.77	0.93	0.88	0.84

Fig. 4A

Year	MFC R ²	Conventional Par Coupon R ²	Conventional Par & Swap R ²	10 Yr Swap Coeff	Conventional Par Coupon Coeff	10 Yr Swap T-Stat	Conventional Par Coupon T-Stat
1990	0.98	0.98	0.98	0.17	0.88	1.41	4.20
1991	0.99	0.85	0.88	-0.13	0.73	-1.36	4.98
1992	0.98	0.93	0.95	-0.20	0.78	-1.57	4.91
1993	0.79	0.64	0.71	-0.24	0.65	-1.39	2.33
1994	0.95	0.91	0.91	0.02	0.70	0.08	2.21
1995	0.90	0.96	0.96	0.03	0.96	0.28	5.15
1996	0.99	0.95	0.96	0.19	0.49	1.11	1.52
1997	0.99	0.99	0.99	-0.11	1.14	-1.91	10.11
1998	0.99	0.97	0.98	-0.05	0.69	-1.67	9.37
1999	0.96	0.90	0.93	-0.25	1.27	-1.94	5.12
90-94	0.92	0.83	0.83	-0.01	0.66	-0.08	5.07
95-99	0.95	0.94	0.94	-0.08	1.01	-1.58	10.40
90-99	0.93	0.86	0.86	0.06	0.61	1.29	7.85

Fig. 4B

Year	MFC R ²	Conventional Par Coupon R ²	Conventional Par & Swap R ²	10 Yr Swap Coeff	Conventional Par Coupon Coeff	10 Yr Swap T-Stat	Conventional Par Coupon T-Stat
1990	0.99	0.98	0.98	0.13	0.93	1.17	4.89
1991	0.97	0.86	0.87	-0.09	0.69	-0.93	4.56
1992	0.97	0.91	0.93	-0.20	0.74	-1.47	4.36
1993	0.83	0.66	0.74	-0.29	0.74	-1.62	2.64
1994	0.96	0.91	0.91	0.01	0.69	0.03	2.34
1995	0.92	0.96	0.96	0.00	1.07	-0.03	4.91
1996	0.99	0.95	0.96	0.28	0.31	1.72	1.02
1997	0.98	0.98	0.99	-0.15	1.19	-2.34	9.05
1998	0.97	0.96	0.96	-0.02	0.61	-0.65	6.50
1999	0.98	0.90	0.93	-0.24	1.29	-1.79	4.92
90-94	0.91	0.81	0.81	-0.02	0.66	-0.21	4.87
95-99	0.95	0.93	0.93	-0.08	1.02	-1.42	9.13
90-99	0.91	0.84	0.84	0.06	0.61	1.25	7.24

Fig. 4C

Year	MFC R ²	10 Yr Swap R ²	10 Yr Treas R ²	Treas & Swap R ²	MFC & Treas R ²	MFC & Swap R ²	MFC & Treas & Swap R ²	10 Yr Treas Coeff	MFC Coeff	10 Yr Swap Coeff
1990	0.93	0.93	0.92	0.94	0.97	0.97	0.97	-0.09	0.68	0.25
1991	0.77	0.77	0.89	0.89	0.91	0.92	0.92	0.20	0.71	0.18
1992	0.93	0.93	0.89	0.94	0.99	0.99	0.99	0.11	0.76	0.22
1993	0.95	0.95	0.73	0.95	0.93	0.99	0.99	-0.06	0.55	0.45
1994	0.94	0.94	0.86	0.94	0.96	0.97	0.97	-0.20	0.73	0.35
1995	0.88	0.88	0.94	0.95	0.99	0.98	0.99	0.32	0.45	0.02
1996	0.97	0.97	0.96	0.97	0.97	0.97	0.98	0.26	0.27	0.18
1997	0.93	0.93	0.95	0.95	0.98	0.99	0.99	0.03	0.71	0.13
1998	0.83	0.83	0.84	0.86	0.99	0.99	0.99	0.07	0.92	0.04
1999	0.91	0.91	0.66	0.93	0.99	0.99	0.99	0.06	0.64	0.11
90-94	0.91	0.91	0.85	0.91	0.94	0.96	0.96	-0.06	0.62	0.37
95-99	0.92	0.92	0.88	0.92	0.98	0.98	0.98	0.11	0.61	0.12
90-99	0.88	0.88	0.84	0.89	0.95	0.96	0.96	-0.01	0.67	0.24

Fig. 4D(i)

10 Yr Treas T-Stat	10 Yr MFC T-Stat	10 Yr Swap T-Stat
-0.39	3.21	1.11
0.54	1.88	0.77
1.22	7.13	2.48
-1.03	6.12	7.83
-1.10	2.98	1.88
2.78	6.50	0.19
1.28	1.19	0.97
0.23	4.34	1.31
1.65	9.93	1.02
0.67	6.15	1.02

-0.81	8.78	6.01
2.45	13.10	2.71
-0.15	14.29	5.68

Fig. 4D(ii)

Year	MFC R ²	10 Yr Swap R ²	10 Yr Treas R ²	Treas & Swap R ²	MFC & Treas R ²	MFC & Swap R ²	MFC & Treas & Swap R ²	10 Yr Treas T-Stat	MFC T-Stat	10 Yr Swap T-Stat
1990	0.98	0.94	0.95	0.95	0.99	0.99	0.99	0.25	5.09	0.81
1991	0.99	0.53	0.77	0.86	0.99	0.99	0.99	1.19	11.24	-1.33
1992	0.98	0.81	0.79	0.82	0.98	0.98	0.98	0.19	8.88	-0.85
1993	0.79	0.53	0.47	0.53	0.79	0.80	0.81	0.61	3.38	-0.78
1994	0.95	0.86	0.88	0.89	0.95	0.96	0.96	0.30	3.58	-0.91
1995	0.90	0.86	0.92	0.93	0.98	0.98	0.98	1.37	5.51	0.56
1996	0.99	0.95	0.94	0.95	1.00	0.99	1.00	2.02	9.59	-0.79
1997	0.99	0.88	0.92	0.92	0.99	0.99	0.99	-0.04	6.93	0.34
1998	0.99	0.74	0.73	0.76	0.99	0.99	0.99	-0.72	18.43	0.94
1999	0.96	0.72	0.40	0.88	0.98	0.97	0.98	-1.82	6.67	0.83
90-94	0.92	0.75	0.80	0.80	0.93	0.92	0.93	2.53	10.18	-1.89
95-99	0.95	0.84	0.78	0.84	0.96	0.96	0.96	0.17	12.32	1.14
90-99	0.93	0.78	0.79	0.81	0.93	0.93	0.93	2.52	15.07	-0.73

Fig. 4E

Year	MFC R ²	10 Yr Swap R ²	10 Yr Treas R ²	Treas & Swap R ²	MFC & Treas R ²	MFC & Swap R ²	MFC & Treas & Swap R ²	10 Yr Treas T-Stat	MFC T-Stat	10 Yr Swap T-Stat
1990	0.99	0.94	0.94	0.95	0.99	0.99	0.99	-0.03	7.43	1.02
1991	0.97	0.58	0.80	0.86	0.98	0.98	0.98	0.79	6.38	-0.45
1992	0.97	0.78	0.76	0.80	0.97	0.97	0.97	-0.22	6.99	-0.58
1993	0.83	0.54	0.51	0.55	0.83	0.84	0.86	1.00	4.09	-1.21
1994	0.96	0.86	0.87	0.89	0.96	0.96	0.96	0.02	3.80	-0.83
1995	0.92	0.84	0.90	0.91	0.98	0.98	0.98	0.99	6.04	0.68
1996	0.99	0.96	0.93	0.96	1.00	1.00	1.00	0.41	8.55	0.98
1997	0.98	0.86	0.90	0.90	0.98	0.98	0.98	-0.66	6.41	0.41
1998	0.97	0.76	0.75	0.78	0.97	0.97	0.97	-0.28	7.82	0.85
1999	0.98	0.73	0.42	0.86	0.99	0.99	0.99	-1.21	9.22	0.03
90-94	0.91	0.73	0.77	0.77	0.91	0.91	0.91	1.72	9.36	-1.52
95-99	0.95	0.82	0.77	0.82	0.95	0.95	0.95	-0.16	11.65	1.10
90-99	0.91	0.77	0.77	0.78	0.92	0.92	0.92	1.49	13.68	-0.18

Fig. 4F

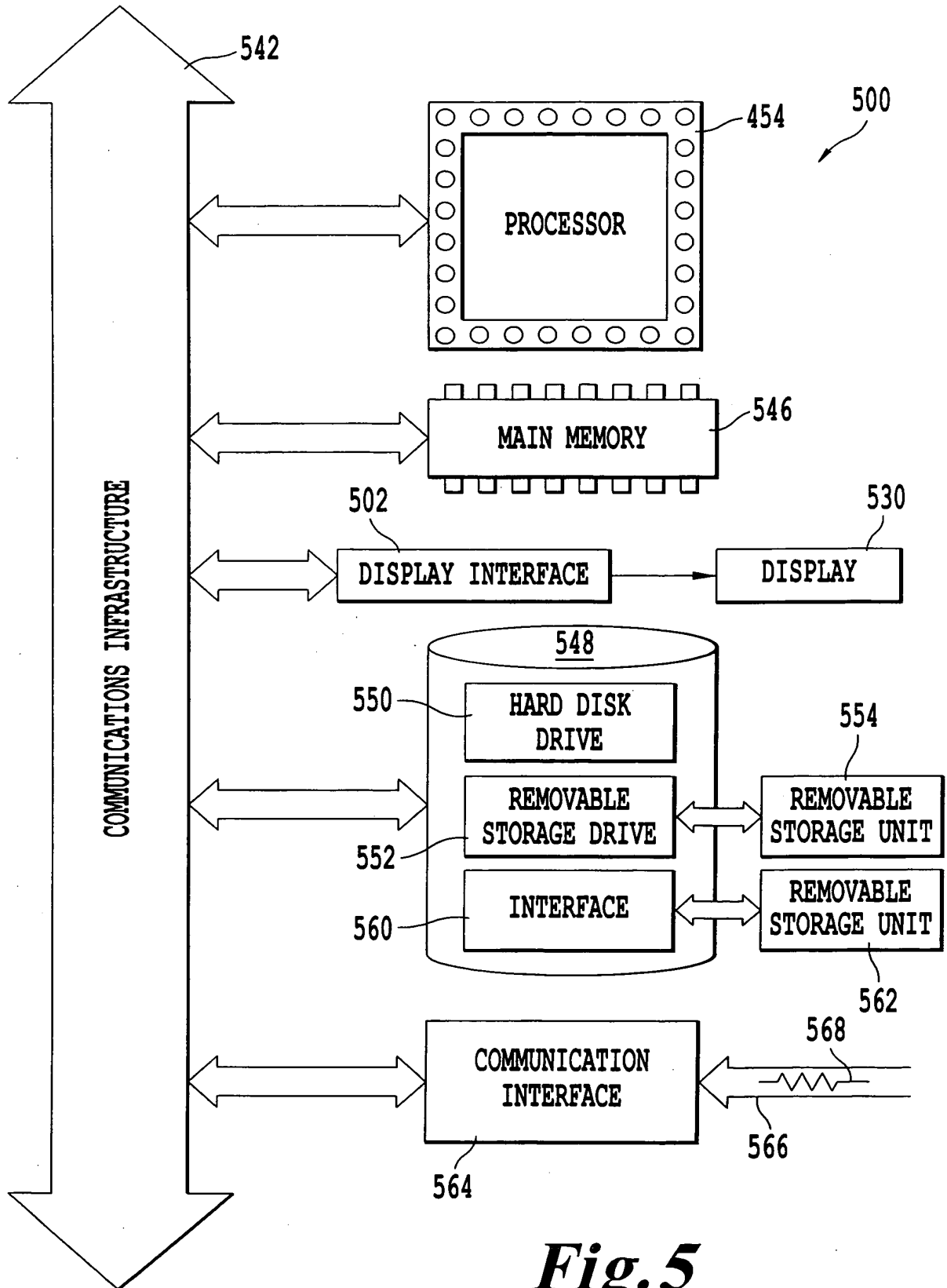


Fig. 5

Contract Month	Mortgage Index Calibration Day	First Trading Day	Last Trading Day	BMA Notification Day
Dec 2000	8/7/00	8/9/00	12/7/00	12/11/00
Jan 2001	9/8/00	9/11/00	1/9/01	1/11/01
Feb 2001	10/6/00	10/9/00	2/6/01	2/8/01
Mar 2001	11/7/00	11/9/00	3/7/01	3/9/01
Apr 2001	12/7/00	12/11/00	4/9/01	4/11/01
May 2001	1/8/01	1/10/01	5/8/01	5/10/01
Jun 2001	2/7/01	2/9/01	6/7/01	6/11/01
Jul 2001	3/7/01	3/9/01	7/10/01	7/12/01
Aug 2001	4/6/01	4/10/01	8/7/01	8/9/01
Sep 2001	5/7/01	5/9/01	9/11/01	9/13/01
Oct 2001	6/7/01	6/11/01	10/9/01	10/11/01
Nov 2001	7/9/01	7/11/01	11/07/01	11/09/01
Dec 2001	8/7/01	8/9/01	12/07/01	12/11/01
Jan 2002	9/10/01	9/12/01	TBD	TBD
Feb 2002	10/5/01	10/9/01	TBD	TBD
Mar 2002	11/7/01	11/9/01	TBD	TBD
Apr 2002	12/7/01	12/11/01	TBD	TBD

Fig. 6